

REMARKS

Reconsideration and allowance of the subject application are respectfully requested. By this Amendment, Applicant has cancelled claim 14. Therefore upon entry of this Amendment, claims 1-13 and 15-27 are all the claims pending in the application. In response to the Office Action, Applicant respectfully submits that the claims define patentable subject matter.

I. Overview of the Office Action

Claim 13 is rejected under 35 U.S.C. § 102(e) as being anticipated by Watson, Jr. (U.S. Patent No. 7,095,732, hereafter “Watson”). Claims 1, 7, 16, 21, 24, and 25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Watson in view of Billhartz et al. (U.S. Patent No. 6,954,435, hereafter “Billhartz”). Claims 14, 17, 18, and 27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Watson in view of Billhartz, and further in view of Sholander et al. (U. S. Patent No. 7,177,295, hereafter “Sholander”). Claim 12 is allowed. Claims 2-6, 8-11, 15, 19, 20, 22, 23, and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. By this Amendment, Applicant has cancelled claim 14, thereby rendering moot the rejection of claim 14.

II. Prior Art Rejections

A. Rejection Based on 35 U.S.C. § 102(e)

The Examiner alleges that Watson discloses all of the features of independent claim 13. Applicant respectfully disagrees with the Examiner’s position, and submits that claim 13 is not anticipated by Watson.

Claim 13 recites in part:

a route setting unit, which searches for a forwarding route which reaches from the transmitting node to a receiving node via an intermediate node satisfying QoS requirements; and

a data communication unit, which forwards data to the receiving node through the forwarding route set by the route setting unit.

Applicant respectfully submits that there is no teaching or suggestion in Watson of these features of the claim.

Watson teaches a system for providing access control for mobile ad hoc networks. Manager nodes (105, 110, 115) control access by other nodes to a shared network. A first node 101 transmits a request to a manager node 105, indicating that the node 101 requires a quality of service (QoS) link to another node. The manager node 105 determines whether the QoS link from the first node 101 to the second node can be supported and sends an accept message to the first node 101 when the QoS can be supported.

The Examiner acknowledges that Watson does not teach or suggest a route setting unit or a data communication unit as claimed. Accordingly, for at least this reason the claims are not anticipated by Watson, since each and every feature of the claim is not taught or suggested by the cited reference.

Secondly, there is no teaching or suggestion in Watson of “a route setting unit, which searches for a forwarding route which reaches from the transmitting node to a receiving node”, as recited in independent claim 13.

Watson teaches that if a first node (for example, node 101) wishes to establish a QoS link with a second node (for example, node 103), node 101 would send a QoS request to its QoS manager (node 105) (column 5, lines 54-65). Node 105 would then send a request to node 103 to

determine whether node 103 could support the QoS link (column 6, lines 12-19). If node 103 cannot support the QoS link, a deny message is sent to node 101 (column 6, lines 20-30). Accordingly, the Watson system does not search for a forwarding route which satisfies QoS requirements, as required by the claim, since in Watson only a single route is established between node 101 and destination node 103, thus obviating the need to search for a forwarding route.

In the claimed invention, a route setting unit searches for a forwarding route which reaches from the transmitting node to a receiving node via an intermediate node satisfying QoS requirements; and a data communication unit forwards data to the receiving node through the forwarding route set by the route setting unit. Applicant respectfully submits that this aspect of the claim is neither taught nor suggested by the cited reference, and accordingly, submits that claim 13 is not anticipated by Watson.

B. Rejection Based on 35 U.S.C. § 103(a)

With respect to independent claim 1 and analogous independent claims 16, 21 and 25, the Examiner alleges that Watson discloses all of the features of these claims except for the feature “selecting at least one QoS management node among different nodes within a predetermined range which are not included on a forwarding route”. The Examiner thus relies on Billhartz to allegedly cure this deficiency. Applicant respectfully submits that claims 1, 16, 21, and 25 would not have been rendered obvious in view of the cited references.

First, Applicant respectfully submits that there is no teaching or suggestion in Watson of the feature “the QoS management node, changing the forwarding route on the basis of the QoS management information so that the changed forwarding route passes through a different node

satisfying the QoS requirements, if it is expected that at least one intermediate node existing on the forwarding route will not satisfy the QoS requirements”, as recited in independent claim 1 and analogously recited in independent claims 21 and 25.

The Examiner cites column 6, lines 1-11 of Watson as allegedly disclosing this feature of the claim. However, this cited portion of Watson merely discloses that a QoS manager determines whether it can support a QoS request. If the QoS manager determines that it can support the request, and it is not the destination node, the QoS manager sends a request to the next node to determine whether the next node can support the QoS link. On the other hand, if the QoS manager determines that it cannot support the request, the QoS manager simply sends a deny message to the requesting node. Nowhere does Watson disclose that if an intermediate node will not satisfy QoS requirements, the QoS management node will change the forwarding route so that the changed forwarding route passes through a different node which satisfies the quality of service requirements. Watson simply sends a deny message to the requesting node, but does not change a forwarding route as required by the claims.

Secondly, Applicant respectfully submits that there is no teaching or suggestion in Watson of (nor does the Examiner provide specific support in the reference for) the feature “the selected QoS management node, managing QoS management information of the different nodes which are not included on the forwarding route”, as recited in independent claim 1.

Thirdly, the Examiner acknowledges that Watson does not teach or suggest the feature “selecting at least one QoS management node among different nodes within a predetermined range which are not included on a forwarding route”, as recited in the claims. The Examiner relies on Billhartz to cure this deficiency and contends that it would be obvious “to apply the

QoS route request message to find QoS supported nodes taught by Billhartz into the QoS manager selecting method of Watson in order to provide more reliability to the mobile ad-hoc network by selecting one of QoS manager nodes with more than one hop.” This rationale is flawed for at least the following reasons.

First, Applicant respectfully submits that there is no disclosure in Billhartz of “selecting at least one QoS management node among different nodes within a predetermined range which are not included on a forwarding route”, as required by the claims.

The Examiner appears to read the claimed management node on node 5 of Billhartz. However, Billhartz discloses that node 5 is an intermediate node, not a management node as required by the claims. Accordingly, Billhartz does not disclose selecting a management node. Further, the Examiner asserts that node 5 is not included on a forwarding route of node 1 “since it is not 1-hop node of node 1”. Applicant finds that assertion confusing, since there is no requirement that a forwarding route may only be one hop.

Further, Sholander does not cure the deficiencies of Watson and Billhartz.

For these reasons, Applicant respectfully submits that that the Examiner’s 35 U.S.C. § 103 rejection of claims 1, 16, 21, and 25 is improper.

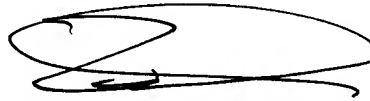
Accordingly, Applicant respectfully submits that independent claims 1, 13, 16, 21, and 25 should be allowable because the cited references do not teach or suggest all of the features of the claims. Claims 2-11, 14, 15, 17-20, 22-24, 26, and 27 should also be allowable at least by virtue of their dependency on independent claims 1, 13, 16, 21, and 25.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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